POP CANS!

This is due on Tues, Nov 22nd at the start of class. No exceptions! (Remember that you cannot re-do projects.) You need to “hand write” everything. Emailed projects will not be accepted! This project has to be NEAT!

Project Questions: *Is the standard pop can the ideal size? (Is it the cheapest container for the volume?)*

*Which 8 oz container is more economical-the short or skinny one?*

In order to answer these questions, you need to complete the following.

Dimensions in centimeters:

12oz H: 12.1, r:3.25

short 8 oz: H: 8.6, r: 3.25

skinny 8 oz: H:13.2, r:2.6

**A. Make a chart that contains the following: (2 pts)**

1. Dimensions of can in centimeters

2. Surface area of all three cans IN CENTIMETERS (regular can, short 8 oz, skinny 8 oz)

**B. Volume (10 points)**

Suppose you want the volume of the standard can to stay the same (354.9 cm3) but you want to use less surface area. Find the dimensions to MINIMIZE the surface area in centimeters AND find the surface area. (Find answer to nearest tenth.) SHOW YOUR WORK

Suppose you want the volume of the 8-oz can to stay the same (236.6 cm3) but you want to use less surface area. Find the dimensions to MINIMIZE the surface area in centimeters AND find the surface area. (Find answer to nearest tenth.) SHOW YOUR WORK

C**. Answer the following questions in words at the end. BE SPECIFIC. Give enough detail so I can tell you thought about the questions. (8 points)**

1. What dimensions would you recommend to Coca-Cola, Pepsi, etc so that they can make the *cheapest* container for a 12 oz can? Why?
2. Why do you think the standard can has the current dimensions and not the dimensions we found? Give a couple reasons.
3. Why do you think V8 made their can 8-oz tall even though it requires more material to make? Give a couple reasons.
4. Why do you think Coca-Cola made their 8-0z can pretty close to optimal surface area? Give a couple reasons.